

Remarks

This Amendment is responsive to the Office Action of **June 10, 2005**. Reexamination and reconsideration of **claims 1-28** is respectfully requested.

Summary of The Office Action

Claims 1-2, 5, 6, 9, 12-13, 15-17 and 19 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 2-3, 5, 9-10, 12-14, 21-22, and 30-31 of application number 10/698,088.

Claims 1-6, 10, 12-16, 19-22, and 24-27 were rejected under 35 U.S.C. § 102(b) as being anticipated by Inoue et al. (U.S. Pat. 5,971,525).

Claims 7, 9, 11 and 17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Inoue et al. (U.S. Pat. 5,971,525) in view of Childers (U.S. Pat. 5,411,343).

Information Disclosure Statements

Applicant respectfully requests the Examiner's consideration of the two previously submitted Information Disclosure Statements. One IDS was filed by the Applicant on June 6, 2005 (which cited a foreign search report with date of mailing of March 9, 2005) and another IDS was filed on June 16, 2005 (which cited a foreign search report with date of mailing of May 27, 2005).

Informalities in the Specification

The specification has been amended to correct an informality found by the Applicant during review of the application. In particular, in paragraph [0048], "bearings" should be inserted between "two" and "128." Applicant does not believe the scope of the specification has

been changed since reference number 128 is identified as “bearings” in other instances. No new matter has been added.

Double Patenting Rejection

Claims 1-2, 5, 6, 9, 12-13, 15-17 and 19 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 2-3, 5, 9-10, 12-14, 21-22, and 30-31 of application number 10/698,088. In response to this rejection, Applicant submits herewith a timely filed terminal disclaimer in accordance with 37 CFR 1.321(c) as the conflicting application, 10/698,088, is commonly owned with the present application.

The Present Claims Patentably Distinguish Over the References of Record

Independent Claim 1

Claim 1 is directed to a print cartridge comprising a cartridge body and a contact array where the columnar arrays of each pair converging toward each other in a direction toward the lower portion. Claim 1 further recites that the cartridge body that is configured for rotatable installation in a printer. Claim 1 has been amended to clarify that the cartridge body is configured for rotatable installation in a printer and the contact array is configured to progressively-upwardly contact the printer during installation of the cartridge body. This feature is supported by, for example, page 15, lines 1-18 of the present application. Thus, no new matter has been added.

Claim 1 was rejected under 35 U.S.C. § 102(b) as being anticipated by Inoue et al. (U.S. Pat. 5,971,525) (hereinafter Inoue). Inoue discloses an ink cartridge 1 for a printing device that is configured for non-rotated installation by inserting the ink cartridge straight into the printing device without rotation of the ink cartridge. This is clearly explained in column 5, lines 35-37 of Inoue, which states that, “... the recording head 202 is fixed to the carriage 201 in the direction indicated by an arrow in FIG. 3...” As shown in FIG. 3, the arrow is straight. Therefore, the recording head 202 is fixed straight into the carriage 201, and Inoue fails to teach or suggest a

print cartridge that is configured for rotatable installation in a printer as required by claim 1, in addition to having the claimed contact array.

As the recording head 202 is configured for straight installation in the printer, Inoue teaches that all of the exposed conductors in the head terminal 103a are configured to contact the exposed conductors of the terminal 204a at approximately the same time. Therefore, the exposed conductors in the head terminal 103a are not configured to progressively-upwardly contact the printer during installation of the cartridge body as required by claim 1.

Additionally, as is clear from FIG. 9 of Inoue, the head carriage 301 of an alternative embodiment is also installed straight into the carriage, similarly to the recording head 202 of FIG. 3. The head carriage 301, therefore, is also not configured for rotatable installation in a printer as required by claim 1, and Inoue fails to suggest such a configuration. Therefore, all the contacts of the contact unit 304a of the carriage are configured to contact the contact area of the contact unit 301c of the head carriage 301 at approximately the same time (see column 7, lines 25-28). Accordingly, the contact area of the contact unit 301c of the head carriage 301 is not configured to progressively-upwardly contact the carriage during installation as required by claim 1.

The Examiner's attention is directed to page 14, lines 14-32 of the present specification, which discusses one problem with cartridge installation, namely, friction forces. One reason for the claimed configuration of the contact area is to address the problem of friction forces during a rotating installation of a cartridge. Conversely, Inoue is not concerned with friction forces, does not mention the problem of such friction forces, and thus does not provide a solution to such a problem. Indeed, such a problem does not exist in Inoue because its cartridge is installed in a straight, non-rotating manner. Therefore, one of ordinary skill would not interpret Inoue as providing a solution to a problem that does not exist in the reference.

Since claim 1 recites features not taught or suggested by the reference, claim 1 patentably distinguishes over the reference. Accordingly, dependent **claims 2-5 and 10** also patentably distinguish over the reference and are in condition for allowance.

Independent Claim-12

Claim 12 has been amended to clarify that each column in each pair of columns converges toward the other column in the pair in a direction toward the lower portion of the cartridge body. This can be seen, for example, in Figure 5 of the present application. Therefore, no new matter has been added by way of this amendment.

Inoue, as is clear from Figure 21 does not teach or suggest each column in each pair of columns converging toward the other column in the pair in a direction toward the lower portion of the cartridge body. In fact, as shown in Figure 21, no column of contact units converges toward another adjacent column of contact units. Therefore, no column of any pair of columns of contact units converges toward the other column in the pair. This can also be seen in Figures 3, 8, 9 10, 17, 24, and 25A.

On the other hand, the contact units of Inoue are shaped as a triangle. As disclosed in column 11, lines 47-51, the contact unit 561 is shaped in a triangle to facilitate the forming of the signal lines for the provision of its higher density. In other words, there needs to be more room at the top for all of the signal lines present. To accomplish this shape, starting from the outside columns, Inoue merely places an additional contact area in the adjacent column. Each column of Inoue is parallel to the other adjacent column. Each column of Inoue, therefore, extends substantially parallel to its adjacent column (see FIG. 21). Therefore, each column in each pair of columns does not converge toward the other column in the pair in a direction toward the lower portion of the cartridge body, as required by claim 12.

Since claim 12 recites features not taught or suggested by the reference, claim 12 patentably distinguishes over the reference. Accordingly, dependent **claims 13-16** also patentably distinguish over the reference and are in condition for allowance.

Independent Claim 19

Claim 19 has been amended to clarify that each columnar array of each pair of columnar arrays converges toward the other columnar array of the pair of columnar arrays in a direction

away from the row of contact areas. As previously explained, Inoue fails to disclose each columnar array of each pair of columnar arrays converging toward the other columnar array of the pair in a direction away from the row of contact arrays.

Since claim 19 recites features not taught or suggested by the reference, claim 19 patentably distinguishes over the reference. Accordingly, dependent **claims 20-22 and 23** also patentably distinguish over the reference and are in condition for allowance.

Independent Claim 25

Claim 25 has been amended to clarify that each column of each pair of columns converges toward the other column of the pair of columns. As previously explained, Inoue fails to disclose each column of each pair of columns converging toward the other column of the pair.

Since claim 25 recites features not taught or suggested by the reference, claim 25 patentably distinguishes over the reference. Accordingly, dependent **claims 26-27** also patentably distinguish over the reference and are in condition for allowance.

103(a) Rejection

Claims 7, 9, 11 and 17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Inoue et al. (U.S. Pat. 5,971,525) in view of Childers (U.S. Pat. 5,411,343). However, as claims 7, 9, 11 and 17 depend from claims 1 and 12, and add additional limitations thereto, the arguments above regarding claims 1 and 12 apply equally to claims 7, 9, 11, and 17. Particularly, Inoue fails to disclose the cartridge body configured for rotatable installation in a printer and the contact array being configured to progressively-upwardly contact the printer during installation of the cartridge body as applied to claim 1. Additionally, Inoue fails to disclose each column in each pair of columns converging toward the other column in the pair in a direction toward the lower portion of the cartridge body as applied to claim 12. Accordingly, claims 7, 9, 11 and 17 patentably distinguish over Inoue in view of Childers.

New Independent Claim 28

Claim 28 is directed to a print cartridge that comprises a cartridge body having a lower portion and a vertical wall, the cartridge body being configured for rotatable installation in a printer, a printhead attached to the lower portion, and a contact array having a plurality of columns of contact areas disposed on the vertical wall, the contact array being configured to progressively-upwardly contact the printer and to reduce frictional forces during installation of the cartridge body. Support for this claim can be found, among other places, in pages 14 and 15 of the present application.

Applicant submits that claim 28 recites features not taught or suggested by the references of record. In particular, as previously explained, Inoue fails to teach or suggest a cartridge body configured for rotatable installation in a printer. Rather, Inoue teaches a cartridge that is configured for straight, non-rotating installation. Accordingly, Inoue fails to disclose the contact array being configured to progressively-upwardly contact the printer and to reduce frictional forces during installation of the cartridge body.

As previously explained, Inoue is not concerned with frictional forces, does not mention the problem of such frictional forces, and thus does not provide a solution to such a problem. Indeed, such a problem does not exist in Inoue because its cartridge is installed in a straight, non-rotating manner. Therefore, one of ordinary skill would not interpret Inoue as providing a solution to a problem that does not exist in the reference.

Accordingly, Inoue fails to disclose the cartridge body being configured rotatable installation in a printer and the contact array being configured to progressively-upwardly contact the printer and to reduce frictional forces during installation of the cartridge body, as recited by claim 28.

Since claim 28 recites features not taught or suggested by the references of record, claim 28 patentably distinguishes over the references of record.

The references cited but not applied, individually or in combination with each other, have been considered and do not teach or suggest the recited features of the respective claims. Therefore, all claims are in condition for allowance.

Conclusion

For the reasons set forth above, **claims 1-28** patentably and unobviously distinguish over the references of record and are now in condition for allowance. An early allowance of all claims is earnestly solicited.

Respectfully submitted,

12-SEPT-2005

A handwritten signature in dark ink, appearing to read "Petar Kraguljac", is written over a horizontal line.

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